

Appl. No. 10/666,348
Response Dated 06/20/2005
Reply to Office Action of April 22, 2005

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Previously amended) An apparatus for induction heating, said apparatus comprising:

a plurality of heat transfer plates, each of said heat transfer plates being disposed radially with respect to a magnetic core axis; and

a plurality of magnetic core sections disposed between respective pairs of said heat transfer plates and shaped to form a cylindrical magnetic core assembly.

2. (Previously amended) The apparatus of claim 1 wherein said cylindrical magnetic core assembly has the shape of a circular cylinder.

3. (Previously amended) The apparatus of claim 1 further comprising a cylindrical outer shell disposed to surround said cylindrical magnetic core assembly.

4. (Original) The apparatus of claim 3 wherein said cylindrical outer shell comprises a metal or combination of metals.

5. (Original) The apparatus of claim 3 wherein said cylindrical outer shell comprises a material or combination of materials selected from the group consisting of aluminum nitride and boron nitride.

6. (Original) The apparatus of claim 1 wherein said heat transfer plates comprise a metal or combination of metals.

7. (Original) The apparatus of claim 1 wherein said heat transfer plates comprise a material or combination of materials selected from the group consisting of aluminum nitride and boron nitride.

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8. (Previously amended) The apparatus of claim 1 wherein said magnetic core sections comprise a ferromagnetic material.

9. (Withdrawn) The apparatus of claim 1 further comprising a coil winding disposed above said cylindrical core assembly.

10. (Withdrawn) The apparatus of claim 1 further comprising an annular coil winding disposed at least partially inside an annular recess in said cylindrical core assembly.

11. (Withdrawn) The apparatus of claim 1 further comprising a support platform disposed above said cylindrical core assembly.

12. (Withdrawn) The apparatus of claim 1 further comprising a heat sink disposed below and thermally coupled to said cylindrical core assembly.

13. (Withdrawn) An apparatus for induction heating, said apparatus comprising:

a plurality of heat transfer plates, each of said heat transfer plates being disposed radially with respect to a core axis;

a plurality of core sections disposed between respective pairs of said heat transfer plates and shaped to form a cylindrical core assembly;

a support platform disposed above said cylindrical core assembly; and

a heat sink disposed below and thermally coupled to said cylindrical core assembly.

14. (Withdrawn) The apparatus of claim 13 wherein said cylindrical core assembly has the shape of a circular cylinder.

15. (Withdrawn) The apparatus of claim 13 further comprising a cylindrical outer shell disposed to surround said cylindrical core assembly.

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16. (Withdrawn) The apparatus of claim 13 wherein said heat transfer plates comprise a metal or combination of metals.

17. (Withdrawn) The apparatus of claim 13 wherein said core sections comprise a ferromagnetic material.

18. (Withdrawn) The apparatus of claim 13 further comprising a coil winding disposed above said cylindrical core assembly.

19. (Withdrawn) The apparatus of claim 13 further comprising an annular coil winding disposed at least partially inside an annular recess in said cylindrical core assembly.

20. (Previously amended) A method of making an apparatus for induction heating, said method comprising:

disposing a plurality of heat transfer plates radially with respect to a magnetic core axis; and

disposing a plurality of magnetic core sections between respective pairs of said heat transfer plates, said magnetic core sections being shaped to form a cylindrical magnetic core assembly.

21. (Previously amended) The method of claim 20 wherein said cylindrical magnetic core assembly has the shape of a circular cylinder.

22. (Previously amended) The method of claim 20 further comprising disposing a cylindrical outer shell to surround said cylindrical magnetic core assembly.

23. (Original) The method of claim 20 wherein said heat transfer plates comprise a metal or combination of metals.

24. (Original) The method of claim 20 wherein said heat transfer plates comprise a material or combination of materials selected from the group consisting of aluminum nitride and boron nitride.

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25. (Previously amended) The method of claim 20 wherein said magnetic core sections comprise a ferromagnetic material.

26. (Withdrawn) The method of claim 20 further comprising disposing a coil winding above said cylindrical core assembly.

27. (Withdrawn) The method of claim 20 further comprising disposing an annular coil winding at least partially inside an annular recess in said cylindrical core assembly.

28. (Withdrawn) The method of claim 20 further comprising disposing a support platform above said cylindrical core assembly.

29. (Withdrawn) The method of claim 20 further comprising thermally coupling a heat sink below said cylindrical core assembly.

30. (Withdrawn) A method of making an apparatus for induction heating, said method comprising:

disposing a plurality of heat transfer plates radially with respect to a core axis;

disposing a plurality of core sections between respective pairs of said heat transfer plates, said core sections being shaped to form a cylindrical core assembly;

disposing a support platform above said cylindrical core assembly; and

thermally coupling a heat sink below said cylindrical core assembly.

31. (Withdrawn) The method of claim 30 wherein said cylindrical core assembly has the shape of a circular cylinder.

32. (Withdrawn) The method of claim 30 further comprising disposing a cylindrical outer shell to surround said cylindrical core assembly.

33. (Withdrawn) The method of claim 30 wherein said heat transfer plates comprise a metal or combination of metals.

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34. (Withdrawn) The method of claim 30 wherein said heat transfer plates comprise a material or combination of materials selected from the group consisting of aluminum nitride and boron nitride.

35. (Withdrawn) The method of claim 30 wherein said core sections comprise a ferromagnetic material.

36. (Withdrawn) The method of claim 30 further comprising disposing a coil winding above said cylindrical core assembly.

37. (Withdrawn) The method of claim 30 further comprising disposing an annular coil winding at least partially inside an annular recess in said cylindrical core assembly.